



## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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<b>(21) International Application Number:</b> PCT/US95/08331 <b>(22) International Filing Date:</b> 30 June 1995 (30.06.95)  <b>(30) Priority Data:</b> 08/268,809 30 June 1994 (30.06.94) US  <b>(60) Parent Application or Grant</b> (63) Related by Continuation US 08/268,809 (CIP) Filed on 30 June 1994 (30.06.94)  <b>(71) Applicant (for all designated States except US):</b> OKLAHOMA MEDICAL RESEARCH FOUNDATION [US/US]; 825 N.E. Thirteenth Street, Oklahoma City, OK 73104 (US).  <b>(72) Inventors; and</b> <b>(75) Inventors/Applicants (for US only):</b> KOREN, Eugen [US/US]; 10026 Hefner Village Terrace, Oklahoma City, OK 73162 (US). KOSCEC, Mirna [HR/US]; Apartment D, 12418 Trail Oak Drive, Oklahoma City, OK 73120 (US).  <b>(74) Agent:</b> PABST, Patrea, L.; Arnall Golden & Gregory, 2800 One Atlantic Center, 1201 West Peachtree Street, Atlanta, GA 30309-3450 (US).		<b>(81) Designated States:</b> AU, CA, JP, US, European patent (AT, BE, CH, DE, DK, ES, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE).  <b>Published</b> <i>With international search report.</i> <i>Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>
<b>(54) Title:</b> ANTIBODIES TO LIPOPROTEINS AND APOLIPOPROTEINS AND METHODS OF USE THEREOF		
<b>(57) Abstract</b>  Compositions and methods using antibodies which are immunoreactive with specific apolipoproteins to determine the concentrations of lipoproteins such as HDL and LDL, and/or apolipoproteins in human blood, serum or plasma sample, are described. Monoclonal antibodies (MAbs) are described that specifically bind to epitopes present in apolipoproteins and lipoproteins, enabling rapid and reliable determinations of levels of specific blood lipoprotein and/or apolipoprotein levels, including Apo B-100, Apo A-I, Apo A-II, Apo C-III, and Apo E, and thereby determination of relative ratios of HDL and LDL and Lp(a) and Lp(a)II. In a preferred embodiment, the compositions are strips of a solid phase material coated with one or more of the antibodies and are referred to herein as "dipsticks". The dipsticks specifically bind a lipoprotein or apolipoprotein when dipped into a protein sample. The amount of lipid associated with a bound lipoprotein or the amount of apolipoprotein bound on the dipstick is quantitated using an appropriate method, for example, by staining with a lipid stain or reaction with a second labelled antibody. The intensity of the stain on the dipstick is proportional to the concentration of the lipoprotein lipid or apolipoprotein circulating in the blood and can be quantitated by comparison with standards containing known amounts of lipid.		